Age Spots (Sun Spots)

A patina that often comes with age

Our love for the sun is ageless. Unfortunately, our skin isn't.

In the course of your lifetime, the thin layer of skin that protects your body from the perils of the environment will endure countless insults. Ironically, the most detrimental of these is a major source of energy in our world: the sun.

In recent years, our understanding of how the sun affects our skin has grown dramatically. The importance of protecting ourselves from the ravages of ultraviolet light is more widely accepted and understood than ever. Protective measures have become increasingly important as the ozone layer -- our earth's own protective skin, so to speak -- leaves us more vulnerable each year to the sun's dangerous rays.

Age spots are a natural result of exposure to sunlight throughout life. They result when your body produces a pigment to help absorb the dangerous rays of light that can damage skin and the tissues below. While many of us consider age spots an ugly sight, they truly signify that our body is doing something right.

Many over-the-counter and prescription medications are useful in the treatment of age spots. Additionally, several medical and surgical techniques to minimize age spots have come forth in recent years.

Synonyms

- Liver spots
- Brown spots
- Sun spots
- Senile lentigo or lentigines

Detailed Description

Age spots are brown, freckle-like spots. Although they are called age spots, people in their 20s or 30s may have them if they have been exposed to a sufficient amount of sunlight, especially if they have fair complexions.

Virtually everyone with fair skin will get at least a few age spots in the course of their lives. Because age spots are due to sun exposure, they most frequently occur in sun-exposed areas such as the shoulders, the tops of the hands, the arms, and the face.

Age spots are perfectly harmless. They do not change into any kind of skin cancer or premalignant skin growth. But many dangerous or malignant skin growths can resemble age spots. Therefore, it is important for you and your doctor to periodically inspect your skin for unusual changes in areas you believe to be age spots. Unusual changes might include bleeding, excessive growth, and itching.

How Common Are Age Spots?

Age spots occur more frequently in older people. People with a history of frequent sun exposure, such as fishermen, construction workers, and farmers, have a higher incidence of age spots than the general population. Fair-skinned people such as those of Nordic descent are more likely to experience age spots.

Causes

Possible Underlying Causes

Like many other forms of skin pigmentation, age spots result from sun exposure. With long-term exposure to sunlight, the skin's uppermost layer (the epidermis) thickens. Additionally, the skin's pigment-producing cells (melanocytes) increase production of the body's natural pigment, melanin. Melanin is a naturally protective substance that absorbs the sun's harmful ultraviolet rays, and prevents them from penetrating deeper into the skin.

Sun exposure has a cumulative effect. Aging and long-term sun exposure cause the skin to become more vulnerable to sunlight. A modest amount of sun exposure in later years can result in age spots. As time goes by, the excessive melanin produced in response to sun exposure collects in the flat, brown spots we call age spots.

Triggers of Age Spots

Age is the indirect precipitating factor that causes age spots; exposure to sunlight over many years results in these areas of pigmentation. However, sunlight exposure in later years may worsen age spots that are already present.

Diagnosing the Underlying Cause

Age spots are one kind of process in which there is an increase of pigment in the skin. There are many kinds of skin conditions in which the pigment changes. Some of them, such as melanoma, require prompt medical attention. Any concerns about skin changes should be directed to your physician. This is especially true when pigmentation grows, bleeds, itches, or tingles. Evaluation of

areas of pigmentation takes into account your medical history, the clinical appearance, and in certain cases, the results of special tests. Other processes that cause increased pigment include:

- Seborrheic keratosis: a tan- to black-colored lesion with a raised surface and a greasy or wart-like appearance. These often occur on the torso. They require observation alone, but can be removed if they bleed or cause irritation.

- Actinic or solar keratosis: a red- or skin-colored, sharply outlined lesion (3 mm to 10 mm) with a rough surface that often occurs in sun-exposed areas such as the forehead and top of the hands. Though they are harmless in and of themselves, actinic keratoses are often a precursor of squamous cell carcinoma, a dangerous type of skin cancer. Therefore, they require careful observation for change. Actinic keratoses can be treated with skin creams, surgical removal, laser treatment, or cryotherapy (freezing).

- Nevus: a flesh- to black-colored area of pigment within the skin surface (2 mm to 7 mm) caused by the aggregation of pigment-producing cells within the upper layers of the skin. These need only to be observed for change and do not require treatment of any kind.

- Melanoma: a brown, black, blue, red, or white lesion with an irregular outline and surface, usually measuring 5 mm or more. This is a dangerous skin lesion that can spread to other parts of the body. Melanomas must be surgically removed.

- Freckles (ephelides): tan-colored spots 2 mm to 5 mm in size on sun-exposed surfaces. Freckles do not require treatment.

- Café-au-lait spots: brownish spots of various sizes with irregular borders. These are commonly found alone. Numerous spots are found in rare disorders including neurofibromatosis and Albright's syndrome.

Diagnostic Procedures

A Wood's light (a special ultraviolet light) may be used to examine the skin. If your physician believes your pigmented spot may be dangerous, a skin biopsy may be performed. A sample of the tissue can be sent to a pathologist for microscopic examination. The cells of the pigmented area can be identified as malignant (harmful) or benign (harmless).

Treatment

Goals of Treatment

Because many dangerous skin problems can resemble harmless age spots, it's important to have a doctor examine suspicious areas of pigmentation. This is the primary consideration when dealing with age spots.

Treatment is usually unnecessary unless you are bothered by the appearance of the skin. If you wish to remove your age spots, various treatment methods are available including the following: Laser treatment: lasers have been designed to target melanin, the pigment found in brown age spots. These lasers break up the pigment in the spots. The lesions usually disappear permanently after one treatment, but the effectiveness of laser treatment varies from individual to individual.

- Topical creams: there are several over-the-counter skin-bleaching creams that can help fade age spots if they are not too dark. Such bleaching creams contain hydroquinone, and should be used according to the manufacturer's directions. Tretinoin (Retin-A) is a prescription cream that can be used to diminish age spots. It causes peeling of the superficial layers of skin, which are then replaced by newly formed skin tissue. It works slowly, showing results over the course of several months. There are also creams available to help treat actinic or solar keratoses. These creams contain fluorouracil, which stems the growth of such areas.

- Cryotherapy: stubborn age spots may be removed with cryotherapy or freezing. Using liquid nitrogen, your doctor can freeze the spots, which then usually peel off in four to five days.

- Chemical peel: if you have many spots concentrated in one area, a chemical peel might suit you. A mild acid such as trichloroacetic acid (TCA) is used to burn off the top layer of skin where the spots are located.

- Sun protection: avoidance of excessive sunlight will prevent existing age spots from worsening and prevent new ones from forming.

Treatment Options

Products most commonly used:

- Sunscreens
- Tretinoin (Retin-A)
- Skin bleaching creams (Porcelana)

Alternative Care

Though there are few alternative remedies specifically employed for the reduction of age spots, there are several alternative therapies to help improve the skin as a whole.

Herbs

- Aloe vera gel: said to bleach age spots. Many herbalists suggests rubbing age spots with a fresh piece of aloe rather than using commercial preparations, which can contain very little active aloe vera.

- Comfrey root: a paste made of the dried root is left on spots for 20 minutes, then rinsed off with lemon juice.

Supplements

Ensuring adequate intake of the following vitamins and minerals is often advocated to help protect skin from sun damage and hyperpigmentation:

- Vitamin C
- Vitamin D
- Vitamin E
- B vitamins, including pantothenic acid
- Magnesium
- Vitamin A
  Note: vitamin A supplements should be used with caution, as an excess can damage the liver. Vitamin A should also be discontinued during pregnancy and at least three months before attempting to conceive a child.

Self Care & Prevention

Preventing Age Spots

Avoidance of sun exposure is the only prevention against age spots. This is especially important for fair-skinned people. Exercising good judgment when it comes to the amount of sun you get is the best way to avoid age spots down the road. You can also minimize the appearance of age spots by doing the following:
Wear a hat or long sleeves on sunny days to reduce the area of skin exposed to sunlight.

Ultraviolet rays still abound on cloudy or overcast days. If you must be out in the sun regularly for long periods, wear sunblock with maximum sun protection factor (SPF), whether it's sunny or cloudy.

When to Call the Doctor

Consult a doctor if an area of pigmented skin begins to bleed, tingle, itch, grow in size, or change in appearance.

Resources

Websites & Organizations

American Academy of Dermatology
930 N. Meacham Road
Schaumburg, IL 60173
Phone: 847-330-0230 or 888-462-DERM (888-462-3376)
www.aad.org

American Skin Association
150 East 58th Street, 32nd Floor
New York, NY 10155-0002
Phone: 212-753-8260.

Dermatology Foundation
1560 Sherman Avenue
Evanston, IL 60201-4808
Phone: 312-328-2256

www.dermfnd.org

National Health Information Center
P.O. Box 1133
Washington, DC 20013-1133
Phone: 301-565-4167 or 800-336-4797
Fax: 301-984-4256
Email: mailto:nhicinfo@health.org
nhic-nt.health.org

The Society for Investigative Dermatology
Suite 340, 820 West Superior Avenue
Cleveland, OH 44113-1800
Phone: 216-579-9300
Fax: 216-579-9333
Email: SID@SIDNET.org

ThriveOnline
www.thriveonline.com

Women's Dermatologic Society
930 North Meacham Road
Schaumberg, IL 60173
Phone: 847-330-9830
Fax: 847-330-1135
Email: kward@aad.org

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